

I CLAIM:

1. A device-specific dot-gain reducing method for multi-level color-image halftoning regarding the output of a selected color-imaging multi-level halftone output device comprising

based upon observed pixel-infeed-to-halftoning-pixel-output operational characteristics of such a device, creating a pixel-and-color-specific dot-gain reduction curve which relates, as data points for each output color of the device, selected corrections in device pixel infeed intensity to different pre-selected halftone dot patterns of plural pixels including a contained subject pixel which is to be output from the device, where those dot patterns collectively represent the halftone dot-pattern population characteristics of an expected halftoned color image which is to be output by the device,

at a point in the image-processing flow of a stream of color-image pixel data which is upstream from the region where color-image device outputting takes place, and downstream from where halftoning of that data occurs, and for each pixel in the data which is to be output ultimately to become a color-visible pixel, determining in which pre-selected halftone dot pattern that pixel effectively lies and is associated as the contained subject pixel, and the output color intended for that pixel, and then,

relevant to said determining, and in relation to such a determined halftone dot pattern, appropriately applying to the associated, contained subject pixel the created dot-gain reduction curve.

2. The method of claim 1, wherein, with respect to each pre-selected halftone dot pattern of plural pixels, the associated, contained subject pixel lies centrally within the pattern.

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3. The method of claim 2, wherein each pre-selected halftone dot pattern takes the form of a three-by-three matrix of pixels.

4. The method of claim 1, wherein the selected output device is a printer, and
10 said creating is based upon densitometer inspections of such different pre-selected halftone dot patterns which have been printed by the printer, and wherein further, with respect to each such densitometer-inspected pattern, data points used to create the mentioned curve are determined by comparing (a) densitometer-perceived percentage-of-coverage readings that are taken of the printed output pattern with (b) the idealized
15 geometrical-percentage-of-coverage of non-white pixels in the pattern.

5. The method of claim 4, wherein device-printed patterns which are to be densitometer inspected are printed in a larger field containing solely plural ones of such pre-selected pattern.

6. A method for minimizing color-image halftone dot-gain in the output of a multi-level halftone color-imaging output device comprising
- characterizing that device's halftone output, on a per-color basis, regarding pixel-
- 5 pattern-specific dot gain which can be related to device pixel-infeed intensity levels, and
- from that characterizing, creating and then applying to throughput color-image files, on a pixel-by-pixel basis, a pixel-to-device infeed intensity correction value, thus to minimize device-output dot gain.